This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images, please do not report the images to the Image Problem Mailbox.

APR 0 6 2004
PATENT & TRADEMARK OFFICE

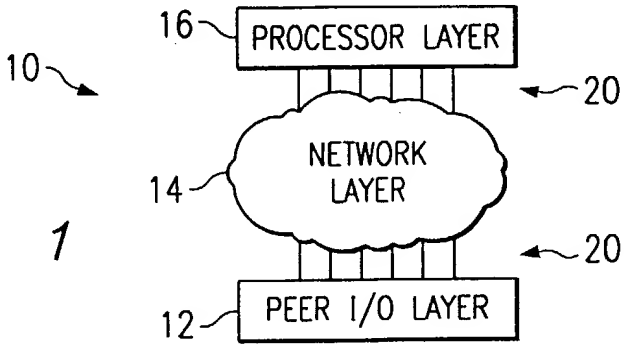
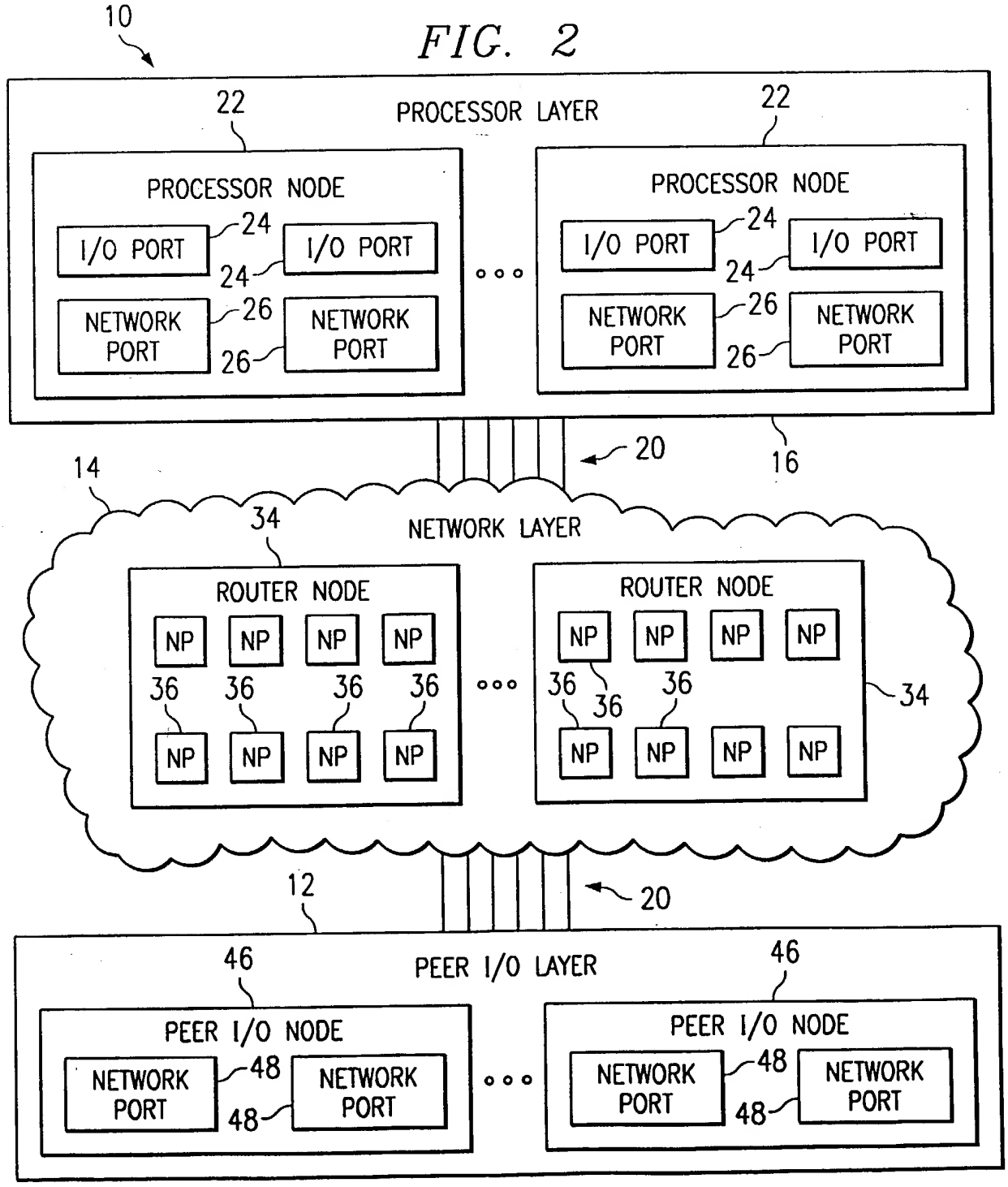


FIG. 1

FIG. 2



APR 0 6 2004
PATENT & TRADEMARK OFFICE

FIG. 3

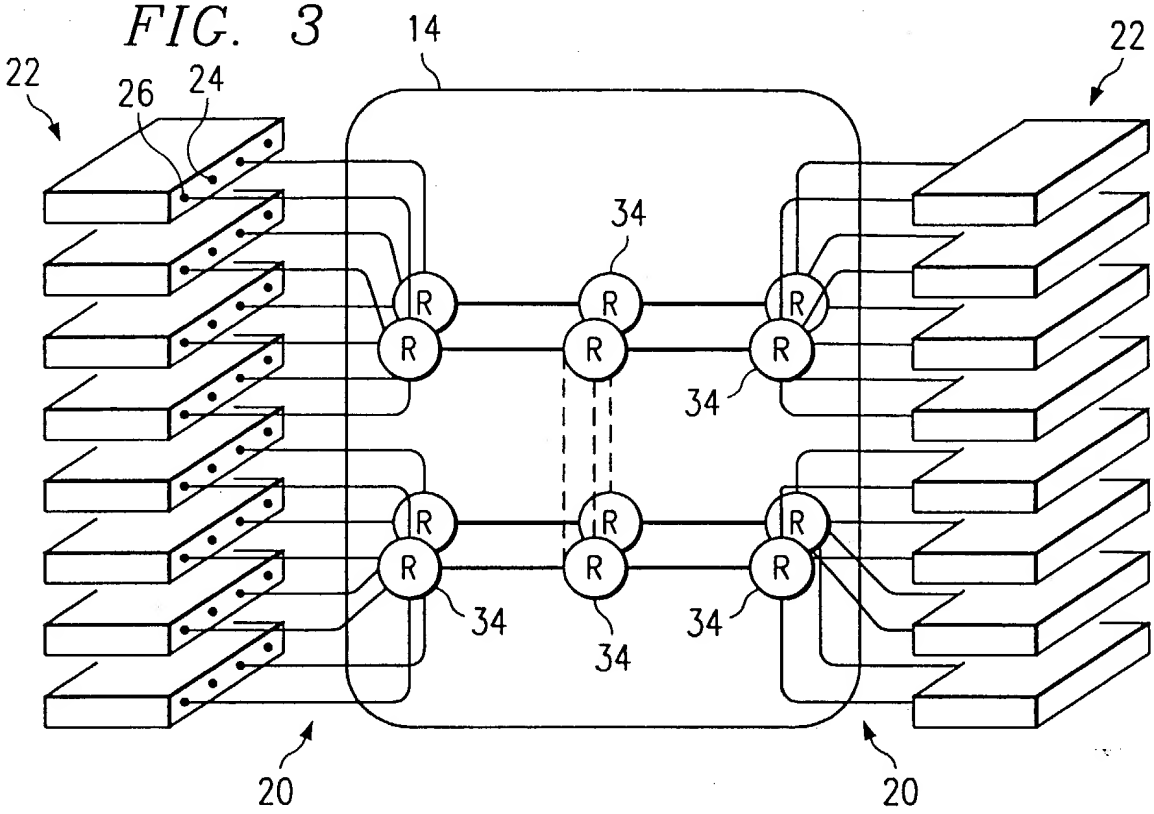
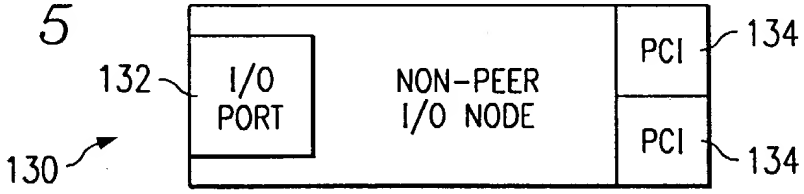


FIG. 5



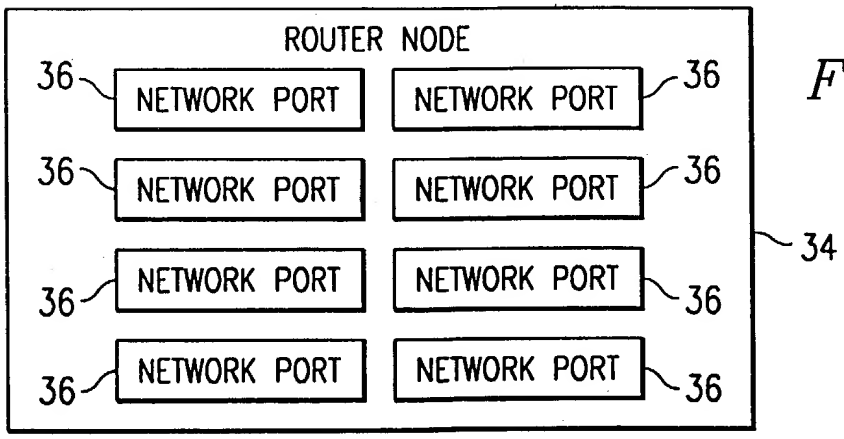


FIG. 6

METHOD AND SYSTEM FOR MAINTAINING DATA AT INPUT/OUTPUT (I/O) INTERFACES FOR A MULTIPROCESSOR SYSTEM
Inventor: Steven C. Miller et al. 062986.0212
U.S. Serial No. 09/910,531
Express Mail: EV 323452452 US Page 3 of 9

FIG. 4

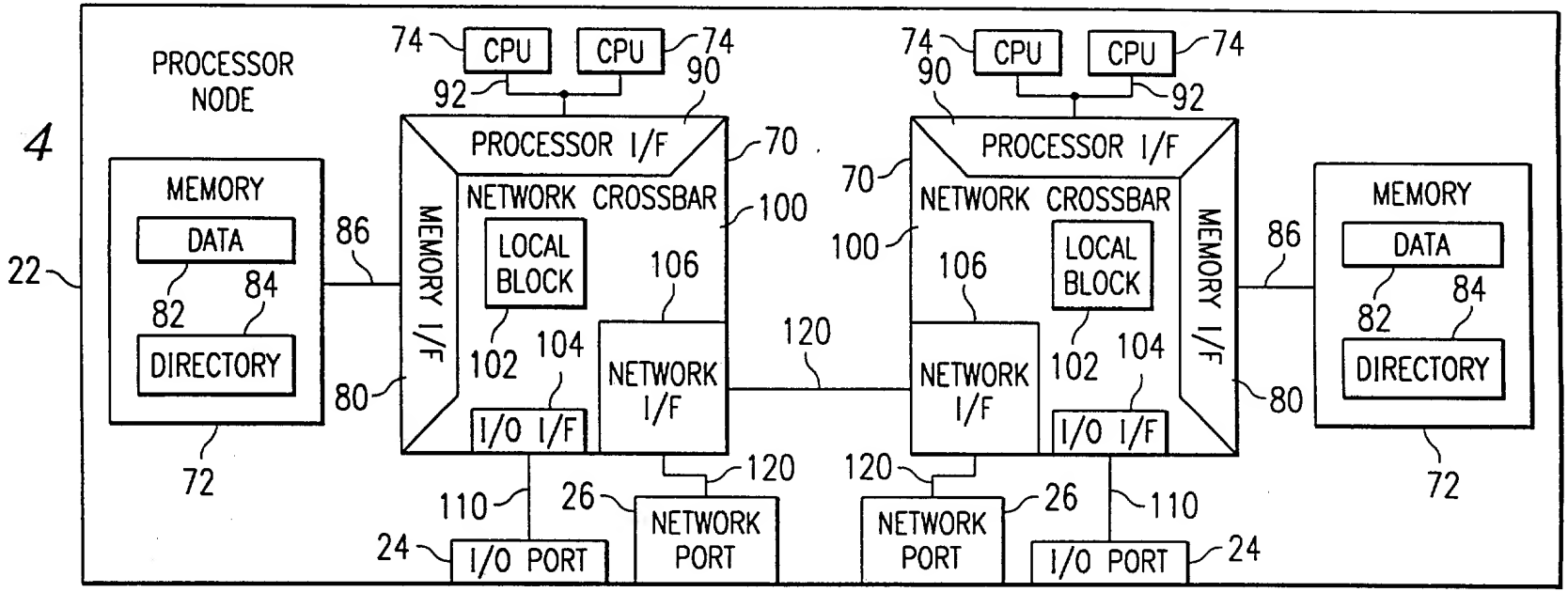
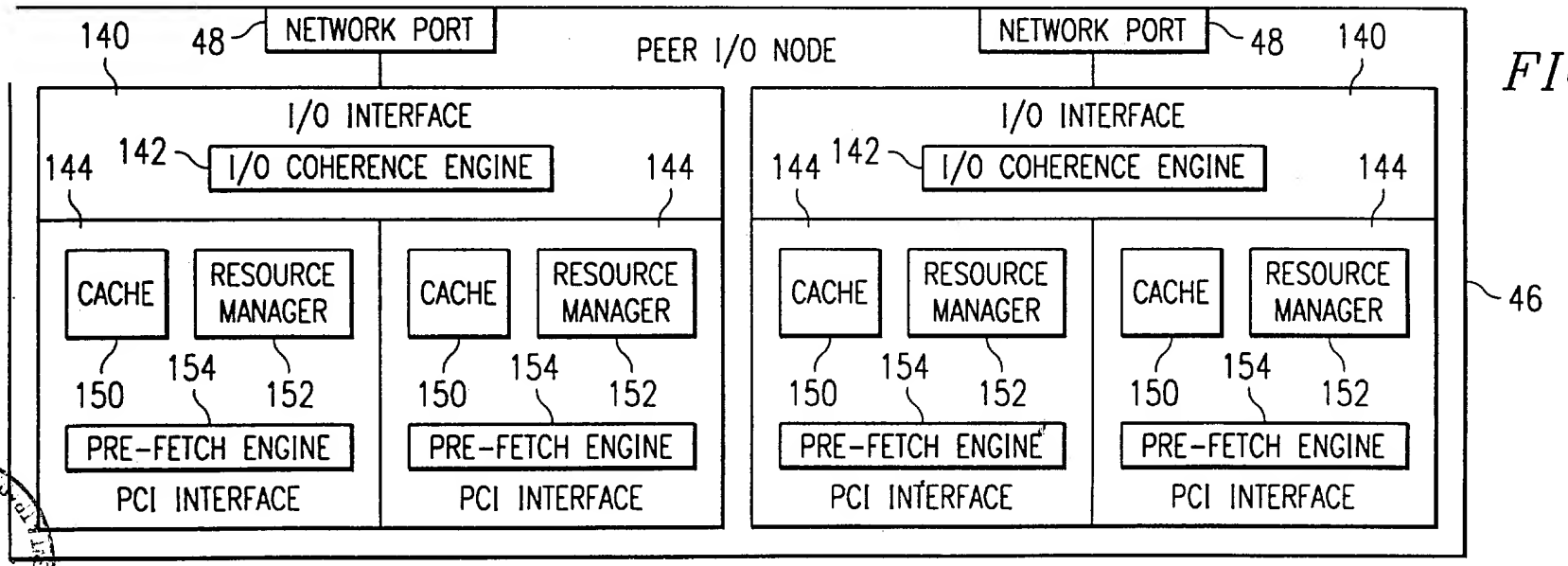


FIG. 7



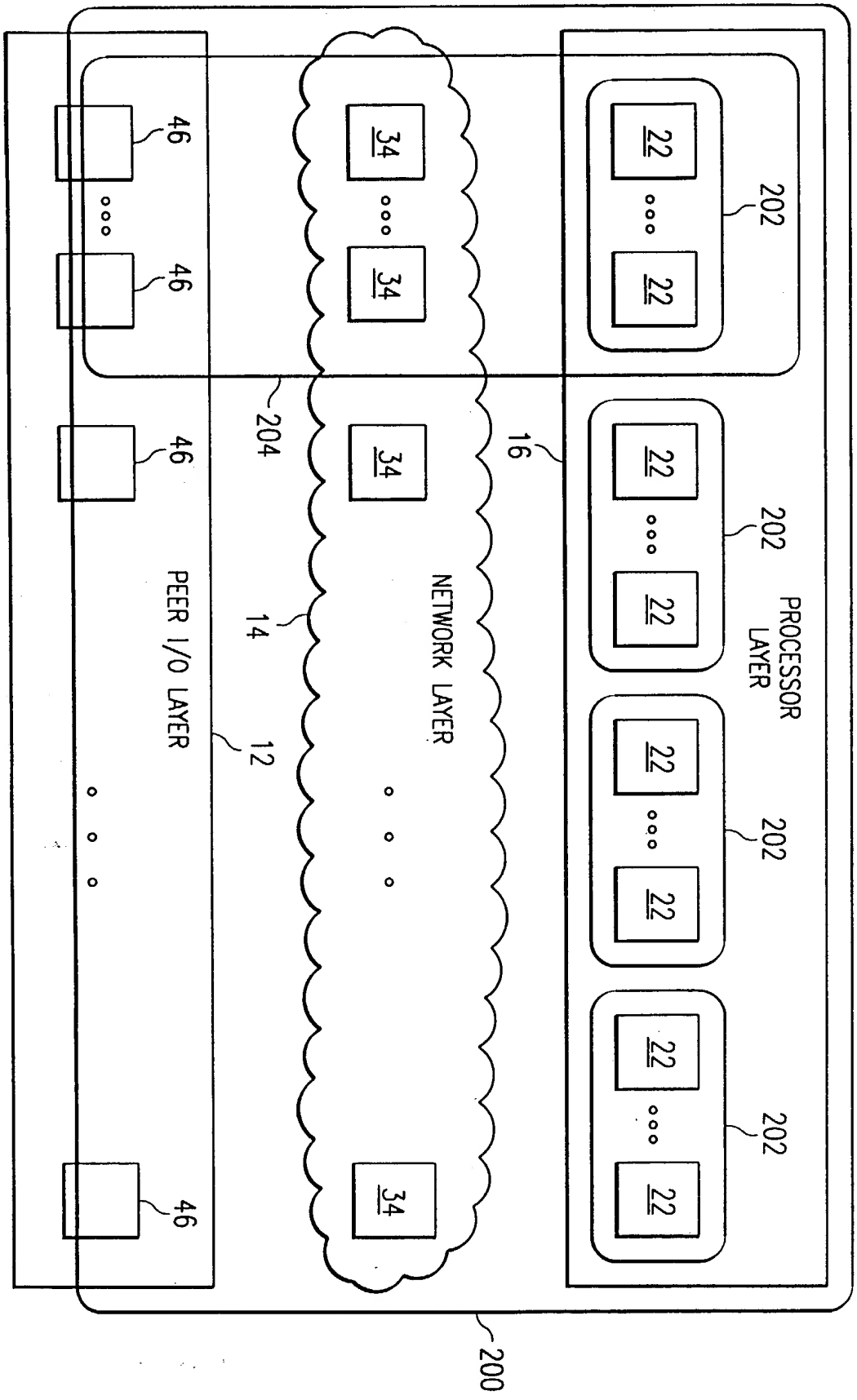

200
202
22
PROCESSOR LAYER
16
NETWORK LAYER
34
14
204
12
PEER I/O LAYER
46

FIG. 8

PATENT & TRADEMARK OFFICE APR 06 2004

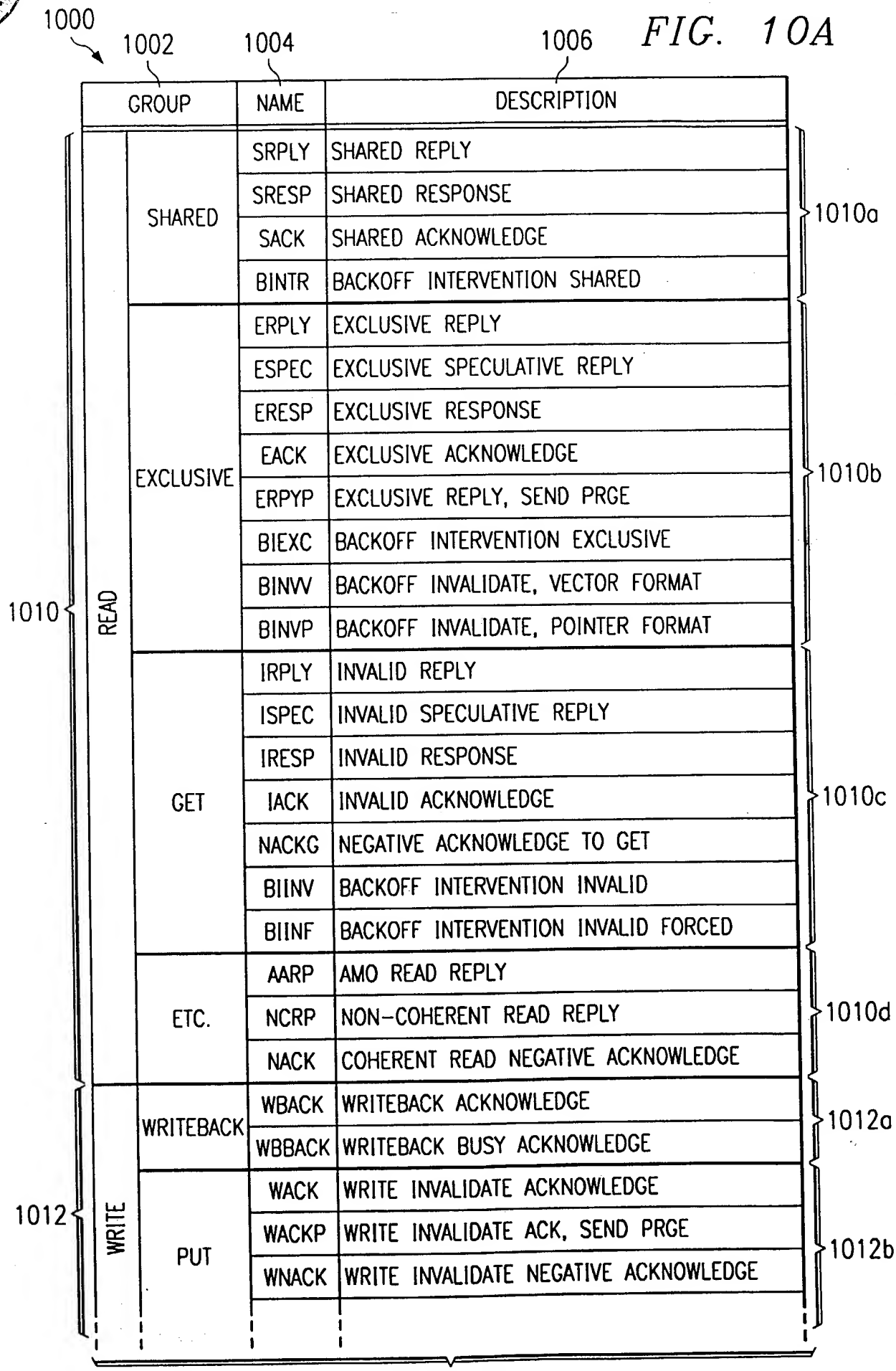
900

902 GROUP		904 NAME	906 DESCRIPTION	
910 READ	SHARED	READ	READ	910a
		RDSHD	READ SHARED	
	EXCLUSIVE	RDEXC	READ EXCLUSIVE	910b
		RDXRO	EXCLUSIVE READ-ONLY TIMED	
		RDXRN	EXCLUSIVE READ-ONLY UNTIMED	
	GET	GET	READ INVALID	910c
		GETF	READ INVALID, FORCED	
	etc.	AMOR	ATOMIC MEMORY OPERATION, READ	910d
		NCRD	NON-COHERENT READ	
912 WRITE	WRITEBACK	WRBK	WRITEBACK	912a
		WRBKR	WRITEBACK, CONCURRENT READ OUTSTANDING	
		IWE	IMPLICIT WRITEBACK EXCLUSIVE	
		RQSH	CEX DROP (RELINQUISH)	
		RQSHR	CEX DROP, CONCURRENT READ OUTSTANDING	
	PUT	PUT	WRITE INVALIDATE	912b
		PFCL	CACHE LINE FLUSH	
	ETC.	AMOW	ATOMIC MEMORY OPERATION, WRITE	912c
		NCWRD	NON-COHERENT WRITE, DOUBLEWORD	
		NCWRF	NON-COHERENT WRITE, CACHE LINE	
914 PROBE	SHARED	INTER	INTERVENTION SHARED	914a
	EXCLUSIVE	INEXC	INTERVENTION EXCLUSIVE	914b
		FLSH	FLUSH	
		ERASE	ERASE	
	GET	ININV	INTERVENTION INVALID	914c
		ININF	INTERVENTION INVALID, FORCED	
	ETC.	INVAL	INVALIDATE	914d
916	INVAL GENERATION	BINEV	BACKOFF INVALIDATE ECHO, VECTOR FORMAT	
		LINVV	LOCAL BLOCK INVALIDATE VECTOR	

FIG. 9

APR 06 2004
PATENT & TRADEMARK OFFICE

FIG. 10A



TO FIG. 10B

APR 0 6 2004
PATENT & TRADEMARK OFFICE

1000

FIG. 10B

FROM FIG. 10A

1012	WRITE	PUT	BFLSH	BACKOFF FLUSH	1012b
			BERSE	BACKOFF ERASE	
		ETC.	AWAK	AMO WRITE ACKNOWLEDGE	1012c
			NCWAK	NON-COHERENT WRITE ACKNOWLEDGE	
1014	PROBE	SHARED	SHWB	SHARING WRITEBACK	1014a
			DNGRD	DOWNGRADE	
			SHWBR	SHARING WRITEBACK, PRIOR WB PENDING	
			DNGDR	DOWNGRADE WITH PRIOR WB PENDING	
		EXCLUSIVE	PRGE	PURGE	1014b
			XFER	OWNERSHIP TRANSFER	
			PRGER	PURGE WITH PRIOR WB PENDING	
			XFERR	OWNERSHIP TRANSFER, PRIOR WB PENDING	
			IWACK	IMPLICIT WRITEBACK RACE ACKNOWLEDGE	
		GET	IIACK	INTERVENTION INVALID ACK	1014c
		ETC.	IVACK	INVALIDATE ACK	1014d
1016	ERROR		PERR	POISONED ACCESS ERROR	
			AERR	READ PROTECTION VIOLATION ERROR	
			WERR	WRITE PROTECTION VIOLATION ERROR	
			DERRR	DIRECTORY ERROR ON A READ REQUEST	
			DERRW	DIRECTORY ERROR ON A WRITE REQUEST	

APR 0 8 2004
PATENT & TRADEMARK OFFICE

FIG. 11

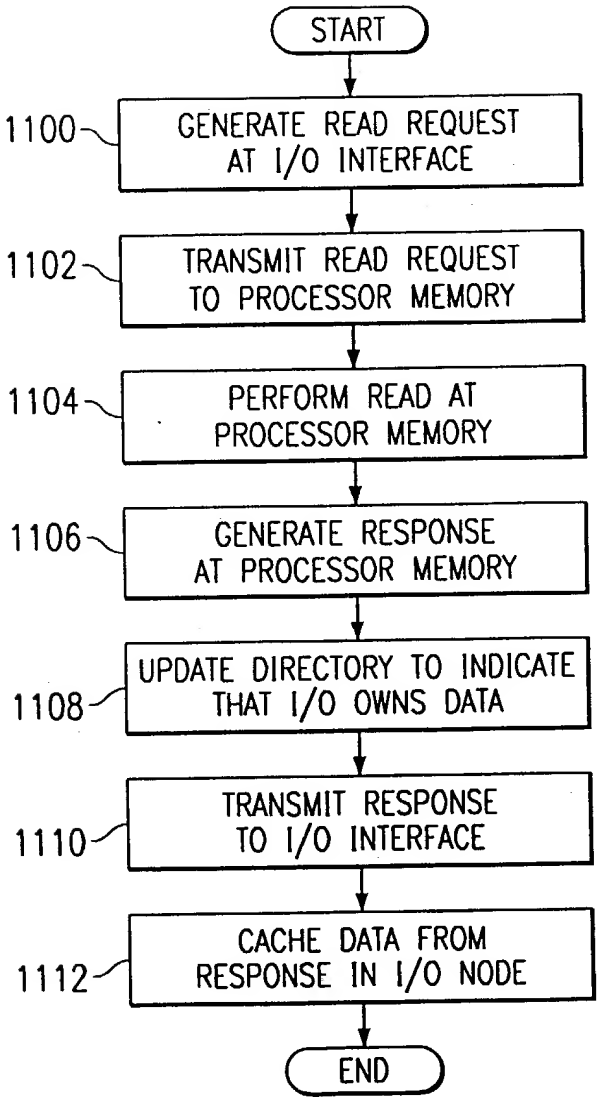
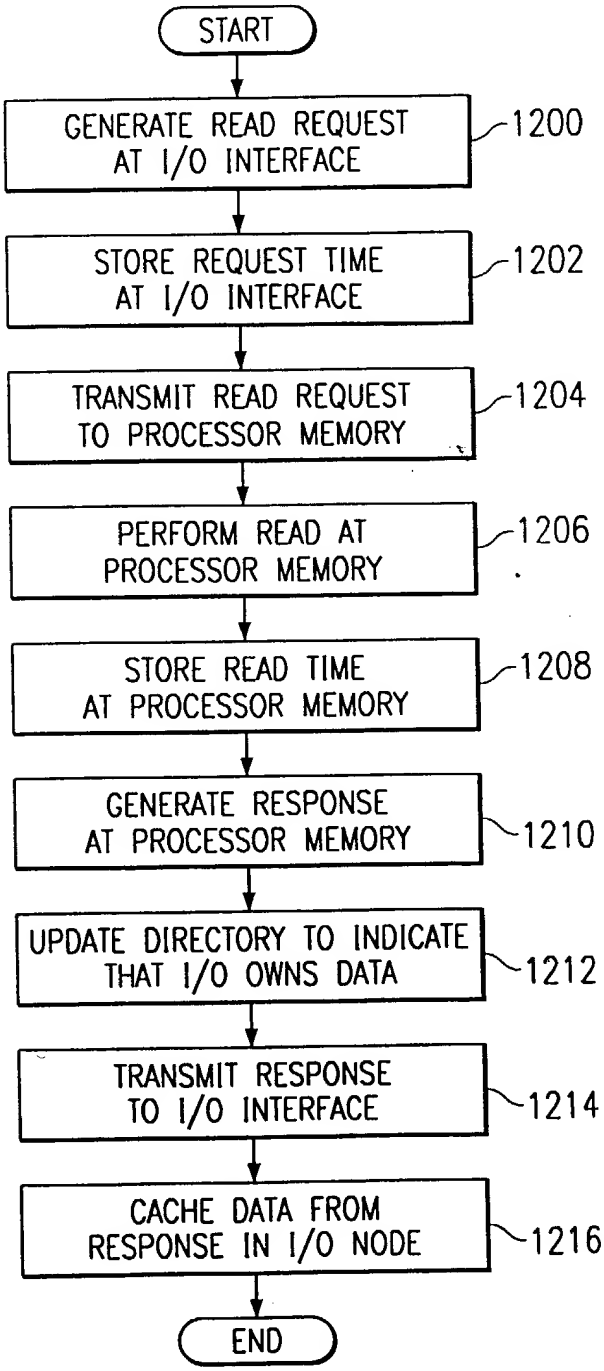


FIG. 12



APR 06 2004
PATENT & TRADEMARK OFFICE

FIG. 13

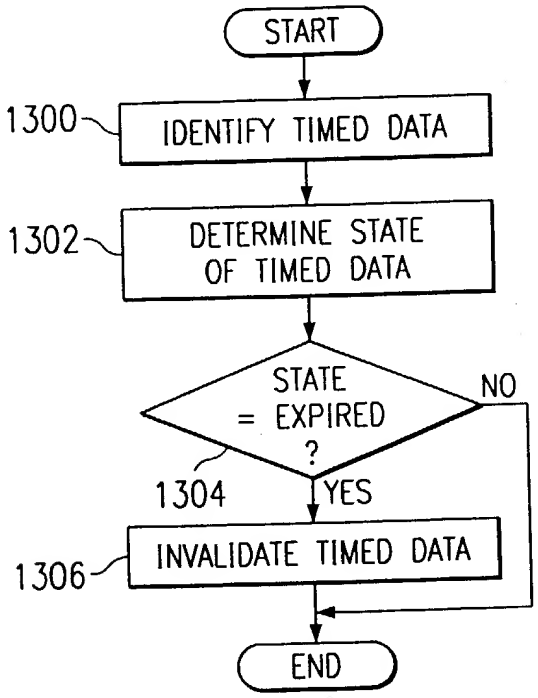


FIG. 14

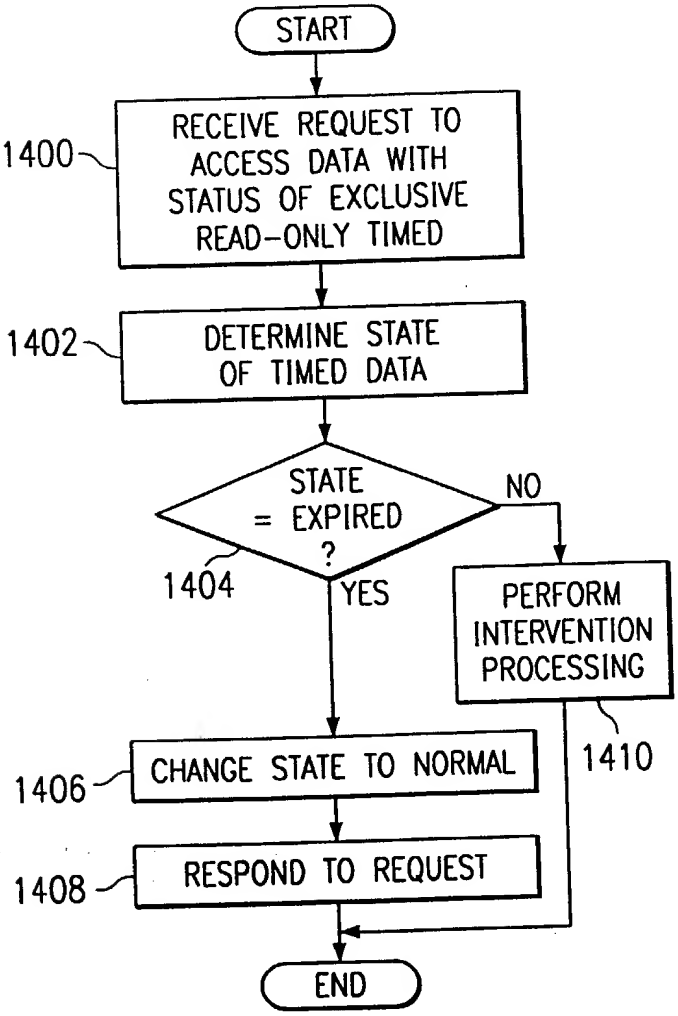
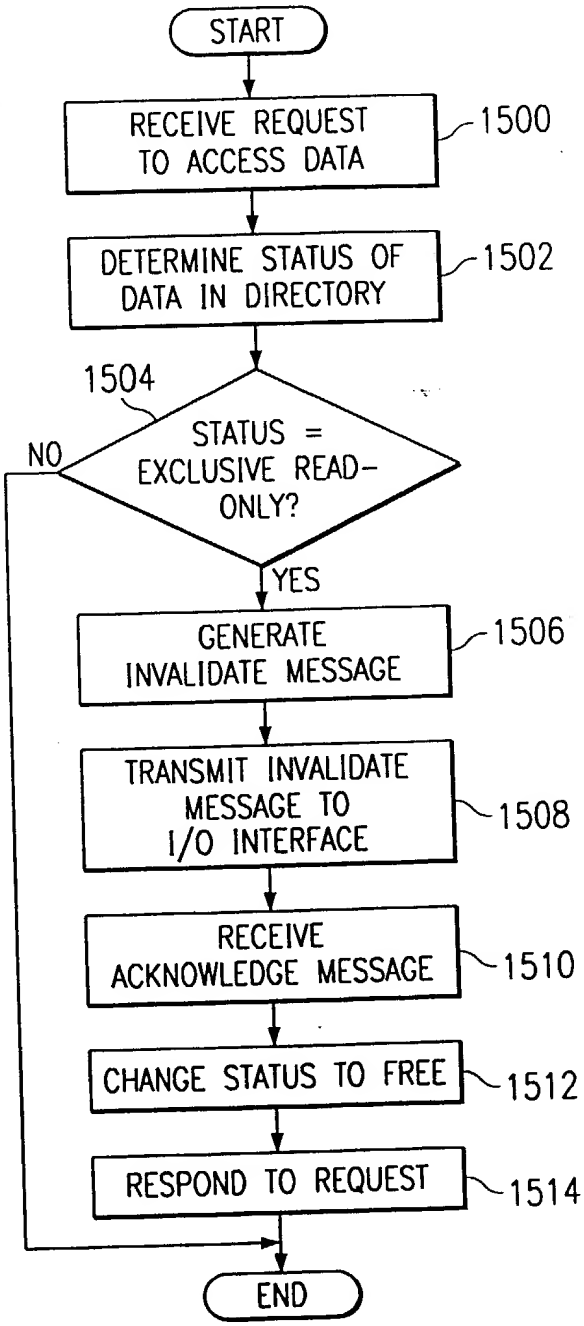



FIG. 15